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Helminth Fauna of Bats in Japan XVIII

With 6 Text-figures

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ABSTRACT A new species of spiroid nematode, *Rictularia rhinolophi* n. sp., was isolated from the common horseshoe-bat, *Rhinolophus ferrumequinum*, collected in Jigoku-gokuraku-dômon at Kasumi-chô, Hyôgo Prefecture.

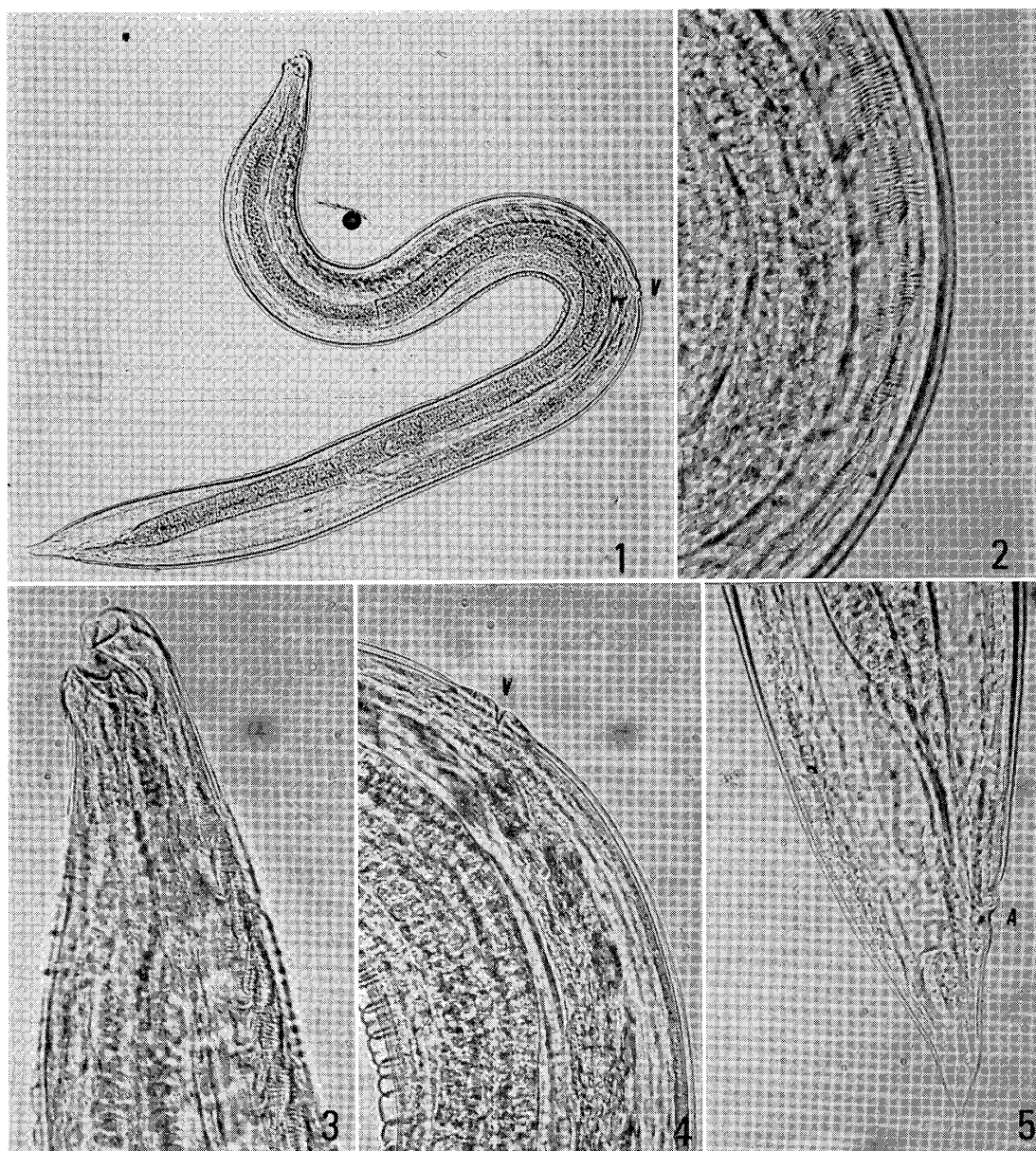
During the period between May, 1968, and October, 1975, a number of common bats, *Rhinolophus ferrumequinum*, *R. cornutus* and *Miniopterus schreibersii*, were collected from various parts of Japan and were examined for the presence of nematodes. Many bats harbored some nematodes (Kagei and Sawada, 1973 a, b and 1977), but only one nematode was isolated from the bat, *Rhinolophus ferrumequinum*. It was found to represent an undescribed species belonging to the genus *Rictularia* Froelich, 1802, of the family Rictulariidae Railliet, 1916.

The following description is based entirely upon the specimen cleared in the glycerin.

***Rictularia rhinolophi* n. sp.**

Description. Rictulariidae; Nematoda. Male unknown.

Female (Fig. 1). Sexually immature. Body 2.47 mm long, maximum width 0.17 mm, in region of broad posterior end; posterior end conical, tail 92 μ long (Fig. 5 A: anus). Three papillae at the anterior end with the same cuticular striations. Cuticle with transverse striation at the anterior part (Figs. 1, 3 and 6). Two rows of combs (Figs. 2 and 6) transformed posteriorly into spines extending along the entire ventral surface on each side of the body to 71.7% its length (1.782 mm from the anterior part). Forty-eight pairs of cuticular combs. Combs at the anterior parts 45 μ long on average. Thirty-four pairs of combs anterior to vulva, 14 pairs of combs posterior to vulva.

Figs. 1-5. *Rictularia rhinolophi* n. sp.

Mouth open anterodorsally, thick-walled buccal capsule, $44\ \mu$ deep and $21\ \mu$ wide (Figs. 3 and 6). Margin of capsule surrounded by numerous teeth; a middle hook present. Esophagus $702\ \mu$ long and $52\ \mu$ wide at termination.

Nerve ring $132\ \mu$ from the anterior end of body. Excretory pore and cervical papillae not found.

Vulva $1.205\ \text{mm}$ (48.8%; V in Figs. 1 and 4) from the anterior end of body. Vagina extending posteriorly to a distance of $48\ \mu$ before dividing into two uteri.

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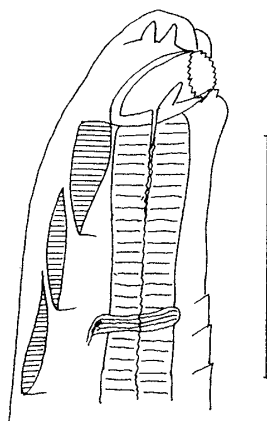


Fig. 6. Anterior part of *Rictularia rhinolophi* n. sp. (scale: 100 μ).

Host. *Rhinolophus ferrumequinum*.

Locality. Jigokugokuraku-dômon, Kasumi-chô, Hyôgo Prefecture, Japan.

Date. July 23, 1974.

Remarks. The classification of the nematodes belonging to the genus *Rictularia* has been generally based on females, except for the three species, *R. vulpis*, *R. muris* and *R. quinqueflabellum*, described by Galli-Valerio (1932) and Sadovskaja (1956), whose descriptions were based on the male. Accordingly, Cuckler (1939) and Dollfus and Desportes (1944-'45) adopted female characters for compiling their keys to identifying species of this genus.

According to Dollfus and Desportes (1944-'45), Yamaguti (1961) and Skrjabin *et al.* (1971), more than 56 species of the genus *Rictularia* were reported all over the world, and 7 species were previously described from bats: *R. bovieri* Blanchard, 1886 (Europe); *R. elegans* Travassos, 1928; *R. lucifugus* Douvres, 1956; *R. macdonaldi* (Dobson, 1880) (Africa, North America; Mituch, 1964); *R. nana* Caballero, 1943 (Mexico); *R. spinosa* (Willemoes-Suhm, 1869) (Europe); and *R. sp.* (France; Dollfus *et al.*, 1961). However, all these seven species of *Rictularia* are distinguished from the present species by a small number of paired cuticular appendages (combs), position of vulva from the anterior end (48.8%), and the distance of the last combs from the anterior end (71.4%).

The specific name is derived from the generic name of the host, *Rhinolophus ferrumequinum*. This is the first record of the genus *Rictularia* from Japanese bats.

Recently, Kenney *et al.* (1975) reported that the human beings are also infected by a *Rictularia*. Thus, the *Rictularia* nematodes of bats become more important than before from the view-point of zoonosis.

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